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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,529	03/24/2006	Changling Liu	034226R002	5464

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EXAMINER	
KATAKAM, SUDHAKAR	

ART UNIT	PAPER NUMBER
1621	

MAIL DATE	DELIVERY MODE
02/12/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,529	LIU ET AL.	
	Examiner	Art Unit	
	Sudhakar Katakam	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 9-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 9-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the application

1. Receipt of Applicant's request for continued examination filed on 2nd Dec 2008 is acknowledged.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2nd Dec 2008 has been entered.

Specification

2. The disclosure is objected to because of the following informalities: In page 4, in the formula (I), the groups E and M are not shown, however these groups are defined just below the formula.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

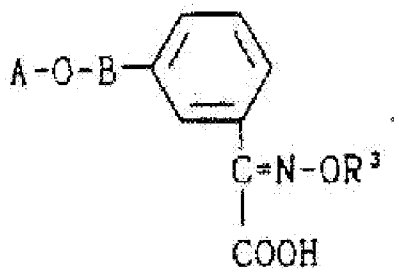
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

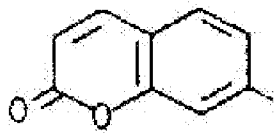
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by **Hayase et al** (JP 04182461 A).

Hayase et al disclose a compound of the following formula,



(IV)

where A is  , B is $-CH_2-$, and R3 is methyl.

The above formula anticipates applicants compound having the general formula (I), when R_1 is hydrogen, B is O, A is N, R_2 is methyl, and R_3 to R_8 are hydrogen.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

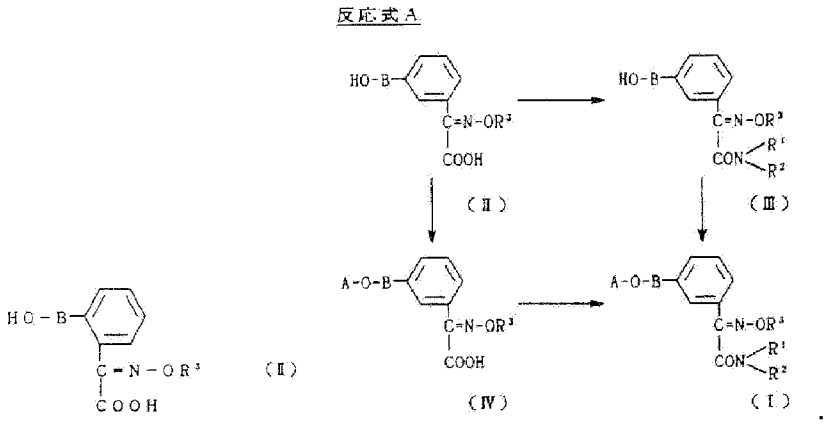
6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3-5 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hayase et al** (JP 04182461 A) in view of **O'Mahony et al** (US 6,034,121) and **Fischer et al** (US 6,906,007).

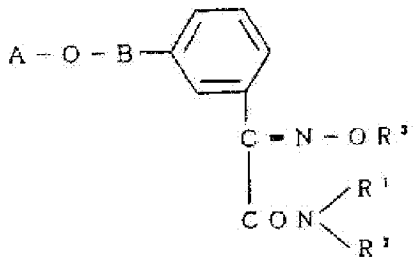
Hayase et al teach a new fungicidal alkoxyiminoacetic acid amide derivative of formula (I), wherein R_1 and R_2 are each hydrogen or lower alkyl, R_3 is lower alkyl, A is hetero ring and optionally substituted by at least one of oxo, halo, phenyl or divalent lower alkylene and B is a bond or -CH_2- group [see Abstract, full translation of article is pending]. **Hayase et al also** teach that A is a coumarine [see compound 51].

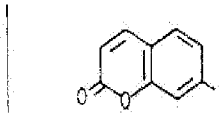
Hayase et al also teach the preparation of formula (I) from the formula (II) [see the reaction scheme in page 3], see below:



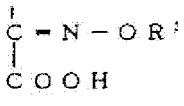
Hayase et al also teach a new fungicidal alkoxyiminoacetic acid amide derivative of formula:

第１表

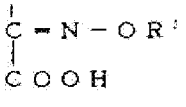


, wherein R_1 and R_2 are each hydrogen or lower alkyl, R_3 is lower alkyl, A is  , and optionally substituted by at least one of oxo, halo, phenyl or divalent lower alkylene and B is a bond or -CH_2- group [see Abstract, full translation of article is pending].

The differences between the instant claims and the **Hayase et al**

(i) is the position of group  on the benzene ring.

(ii) the use of the compound as an insecticide.

With regard to (i) of above, **Hayase et al** clearly showed the group  at two possible positions [see page 3]. Therefore, **Hayase et al** compounds make the instant claims obvious.

With regard to (ii), **O'Mahony et al** teach similar substituted coumarines, in which X is halogen, CN, NO_2, alkyl etc. in a similar fungicidal compound. **Fischer et al** teach that similar coumarines are useful as fungicides and insecticides [col. 32, lines 62-65].

In summary, **Hayase et al** provided sufficient guidance to make the coumarine based fungicides for an ordinary artisan in the art. **O'Mahony et al** showed that in a

similar fungicidal compound, in which coumarines can be substituted by various functional groups. **Fischer et al** showed a heterocyclic compound which can be used as a fungicide as well as insecticide.

The claims would have been obvious because, a person of ordinary skill has a good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product, not of innovation, but of ordinary skill and common sense.

The claim would have been obvious because the design incentives or market forces provided a reason to make an adaptation, and the invention resulted from application of the prior knowledge in a predictable manner.

All the claimed elements were known in the prior art and one skilled person in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The Supreme Court in KSR noted that if the actual application of the technique would have been beyond the skill of one of ordinary skill in the art, then the resulting invention would have been obvious because one of ordinary skill could not have been expected to achieve it.

Therefore, a skilled person in the art would be motivated to utilize **Hayase et al** teachings taking the advantage of **O'Mahony et al** teachings to make the instants

applicants' compound with a reasonable expectation of success, since it is a routine experimental process to add the additional groups on the known compound or core structure for an ordinary skilled person in the art.

Changing such parameters is prima facie obvious because an ordinary artisan would be motivated to explore the analogous compounds through a routine experimentation. Merely modifying the analogous compounds for a known compound is not a patentable modification absent a showing of criticality.

Response to Arguments

8. Applicant's arguments filed on 2nd Dec 2008 have been fully considered but they are not persuasive.

The examiner acknowledges applicants argument that "it is necessary to identify some reason that would have led a chemist to modify a known compound in a particular manner to establish prima facie obviousness of the new claimed compound.

The examiner contends, however, that the obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071,5 USPQ2d 1596 (Fed. Cir. 1988)and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is permissible for the examiner to rely on disclosures and known fungicidal or insecticidal compounds in the art, which fairly teach embodiments of applicant's invention. The claims require a

multitude of elements and it is reasonable for one of ordinary skill in the art to consider these elements being used together.

The examiner acknowledges applicants filed affidavit. However, applicants failed to show the comparative data of their compounds with the closest compound of the closest prior art. In the affidavit, applicants compared the compounds where A is 'CH' group, viz., 1,2,5,6,12,26,37,52, 402,405 and 409. Compound 414 has 'N' for A, however, it has nC_6H_{13} group for the R_4, which is structurally different from the closest prior art. There are some compounds close to the closest prior art, for example compound 153, which is differed by a $-CH_3$ group.

Applicants show how the cited references differ from the instant invention, but the obviousness test under 35 U.S.C. 103 is whether the invention would have been obvious in view of the prior art taken as a whole. In re Metcalf et al. 157 U.S.P.Q. 423.

So, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made, with the teachings of the cited reference to make applicants' claimed compound and its composition with a reasonable expectation of success, since it is within the scope to modify the substitutions on the core structure through a routine experimentation.

Conclusion

9. No claim is allowed in absence of a clear delineation of the claims from the prior art and a side by side showing of unexpected results commensurate in scope of the claims.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhakar Katakam whose telephone number is 571-272-9929. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter G O'Sullivan/
Primary Examiner, Art Unit 1621

/Sudhakar Katakam/
Examiner, Art Unit 1621